Seattle Public Utilities

Memorandum

Date: March 22, 2010

To: Stephanie Brown, SR-520 Project Manager, SDOT

From: Nancy Ahern, Deputy Director, Utility Systems Management Branch

Re: SR-520 Interests and Concerns

Per your request, the purpose of this memo is to summarize at a high level SPU's interests and concerns with the proposed SR-520 project, so that a joint City position can be developed. Our interests and concerns fall into two broad categories, as described below.

L-006-001

Protection or Replacement of Existing Pipelines

SPU owns several water and wastewater pipelines that cross SR-520, including:

- **The Maple Leaf Pipeline** – a 54-inch water transmission pipeline that crosses under SR-520 about 100 feet east of the existing Montlake Bridge and was relocated and replaced in the early 1960s to accommodate SR-520. Up to 750 feet of this pipeline will need to be lowered if SR-520 is expanded.
- **The 430 Pipeline** – a 42-inch water transmission pipeline that crosses under SR-520 between the 10th Ave E and Delmar Ave E overpasses and was relocated and replaced in the early 1960s to accommodate SR-520. Up to 500 feet of this pipeline may need to be lowered or relocated if SR-520 is expanded.
- **The Boylston Avenue Feeder** – a 20-inch pipeline that is located in Boylston Ave E west of I-5 in the I-5 – SR520 interchange area and pre-dates the freeways. Approximately 800 feet of this feeder may need to be relocated due to potential conflict with the new interchange lid.
- **The Roanoke Street Feeder** – a 12-inch pipeline located in E Roanoke Street, extending from the Boylston Ave Feeder (located west of I-5, see above) to 11th Ave E. Up to 1,200 feet of this feeder may need to be relocated due to potential conflict with the new interchange lid.
- **The Boyer Avenue Feeder** – a 20-inch water main that crosses under SR-520 at Boyer Avenue underpass, pre-dates SR-520, and will need to be protected in place if SR-520 is expanded.
- **The Montlake Boulevard Feeder** – a 12-inch water main that crosses SR520 in the Montlake overpass and supplies the area between SR-520 and the Ship Canal. Up to 1,100 feet of this main may need to be replaced if SR-520 is expanded. Distribution mains in E Shelby and E Hamlin Streets crossing Montlake Boulevard may also be impacted.

L-006-001

During engineering design, construction planning, and the permitting process, WSDOT would continue to coordinate with utility providers, including Seattle Public Utilities, regarding the management of potential utility relocations. When relocation of specific pipelines or utilities is determined necessary according to the project design, WSDOT would review the relocation plan with the utility owner case by case and seek approval. Before construction, the exact locations and depths of existing utilities would be verified with utility providers, and construction methods would be designed to avoid or minimize effects on utilities to remain in place.

For utilities with WSDOT franchise agreements, relocation details, including cost responsibility, will be addressed under the provisions in each provider's agreement. WSDOT would coordinate utility relocations and the redesign expenses incurred to avoid utility relocations as a shared cost, depending on the circumstances surrounding the utility according to the taxpayer/ratepayer costs for necessary utility relocations. This coordination would occur in compliance with the federal and state allowances for utility relocation as a result of a federal-aid project. Please see the Social Elements Discipline Report Addendum (Attachment 7 to the Final EIS) for more information regarding effects on utilities and potential mitigation.

L-006-001

- **A 24-inch combined sewer** that carries flows under SR-520 in the vicinity of the Museum of History and Industry to a pump station for conveyance out of the Montlake area. This pipeline was installed in 1961 and may need to be lowered or relocated if SR-520 is lowered or expanded.
- **An 8-inch combined sewer** that carries flows under SR-520 in the vicinity of the Seattle Yacht Club to another pump station for conveyance out of the Montlake area. This pipeline may be impacted by the SR-520 project if supports for the new freeway need to be placed on or near the pipeline.
- **A 24-inch combined sewer** that carries flows under I-5, north of the I-5/SR-520 interchange near Boylston Avenue. The portion of the pipeline under I-5 was constructed in 1959, while the small portion in the City roadway was constructed in 1906. This pipeline may be affected by the treatment facilities for managing stormwater from the proposed interchange lid.

These SPU utilities across and along the SR-520 and I-5 corridors pre-date the freeways. SPU research of real property records for the Montlake area (where the 54-inch water pipeline and one of the 24-inch combined sewers cross SR-520) has so far shown that SPU has sufficient property rights to require WSDOT to bear the cost of any relocations that may be necessary in this area.

The other areas of possible impacts are in the process of being researched. Interactions with WSDOT on the Boylston Sound Walls project a few years ago, where the proposed WSDOT sound walls along I-5 were initially impacting the same Boylston Feeder that may now be impacted by the SR-520 project, have shown some real property peculiarities that were not fully resolved at the time. This issue is likely to come up in the SR-520 project.

Given that the SPU utilities existed before the freeways were built – in City streets or on other City-owned land or within easement on private property - SPU requests that the City take the position that **WSDOT should bear the cost of any water or wastewater pipeline relocations that are necessary**.

The estimated cost range of these impacts is up to $5-7M.

Protection or Enhancement of Water Resources and Water Quality

L-006-002

SPU requests that the City express the following interests in the area of water resources and water quality:

1. The City expects that the SR-520 project will have no impact on the routing or the amounts of stormwater between the City's combined and separated drainage systems, unless it is possible to reduce the amount of flow to the City's combined system through on-site infiltration of stormwater;

L-006-003

2. The City expects that WSDOT will be responsible for constructing, operating and maintaining any water quality or flow control facilities associated with the stormwater treatment requirements of the SR-520 project;

L-006-002

Stormwater discharge would follow all elements and requirements of the City Code, whether applicable to the City's combined sewer system or to the separate stormwater system. This includes volumes and rates of discharge, as well as water quality and flow. Routing of stormwater from the SR 520 project to the City's combined and separated drainage systems will be modified as a result of lid construction. Details will be refined as design advances, in cooperation with the City of Seattle. Please see the Water Resources Discipline Report Addendum (Attachment 7 to the Final EIS) for more information on the potential effects to the City of Seattle's combined sewer system.

L-006-003

WSDOT will be responsible for constructing all stormwater facilities and facility improvements associated with the SR 520, I-5 to Medina project, and will operate and maintain all facilities located within WSDOT right-of-way. For facilities located within City of Seattle right-of-way, WSDOT will design the facilities to meet SPU requirements and will turn over the facilities to the City of Seattle upon construction completion. WSDOT will coordinate with City of Seattle in accordance with the April 30, 1997 "City Streets as Part of State Highways" guidelines developed in cooperation between local , city, and state entities.

L-006-004

L-006-005

L-006-006

L-006-007

3. The City expects that the stormwater treatment for any SR-520 runoff entering the City's separated or combined drainage systems will meet the City's 2009 stormwater code requirements for water quality and flow;
4. Protecting the water quality of Lake Washington is a shared concern of many jurisdictions, including Seattle. Stormwater runoff from roadways is a major source of pollutants entering receiving water bodies, and the City supports the proposed use of street sweeping, if done frequently and with high efficiency sweepers, as an appropriate method for decreasing pollutants discharged to Lake Washington from the SR-520 bridge deck;
5. The City is interested in working with WSDOT on site selection and design of aquatic and wetland mitigation associated with the project; and
6. The SR-520 project should be designed and constructed in a manner that avoids, minimizes or mitigates impacts to salmonids. Among the more important considerations include shielding the water surface from artificial lighting on overwater structures, avoiding impacts to adult migration through the SR-520 project area and minimizing the number and/or size of pilings.

Thank you for requesting SPU's input. Please call Betty Meyer at 206/386-1999 if you have any questions about the interests and concerns in this memo or need additional information.

cc: Betty Meyer, Special Projects, Utility Systems Management Branch (USM)
Dave Hilmoe, Drinking Water Division Director, USM
Trish Rhay, Drainage & Wastewater Systems Management Division Director, USM
Bruce Bachen, Drainage & Wastewater Quality Division Director, USM
Eugene Mantchev, Drinking Water Transmission Manager, USM
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Linda De Boldt, Deputy Director, Project Delivery Branch (PDB)
Liz Kelly, Project Management and Engineering Division Director, PDB
Charlie Madden, Water Engineering Manager, PDB

L-006-004

Please see the response to Comment L-006-002.

L-006-005

High-efficiency sweeping, oversized catch basins, and runoff discharge to the spill containment lagoons would be used to treat stormwater generated from the bridge. A complete description of the function of the containment lagoons in treating and discharging stormwater to Lake Washington is presented in the final All Known, Available, and Reasonable Technologies (AKART) and Water Quality Studies Report. Ecology issued a Conditional Approval of WSDOT's AKART and Water Quality Studies Report on June 30, 2010. The conditional approval letter accepted the proposed treatment system and required that WSDOT institute a monitoring program to examine the effectiveness of the system. Please see the Water Resources Discipline Report Addendum (Attachment 7 to the Final EIS) for more information regarding treatment of stormwater runoff. The AKART report and the Ecology conditional approval letter will be made available when the Final EIS is published.

L-006-006

Throughout the course of this project, City of Seattle representatives have been generous in providing their time to attend coordination meetings, evaluate mitigation priorities and opportunities, and review project documentation. They have been engaged in the Natural Resources Technical Working Group (TWG), which developed impact assessment approaches and mitigation measures for adverse effects on wetlands and aquatic resources. The group's findings are reflected in the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS), in the Conceptual Wetland Mitigation Plan, and in the Conceptual Aquatic Resource Mitigation Plan (Attachment 9 to the Final EIS). WSDOT is committed to continuing consultation with City staff during design planning for the project.

L-006-007

Throughout the course of the project, avoiding, minimizing, and mitigating adverse effects of construction and operation on salmonids and their habitat has been an integral part of project planning and design. This topic has been a central consideration of the Regulatory Agency Coordination Process and related TWGs, including the In-Water Construction TWG, the Stormwater TWG, the Mitigation TWG, the Bridge Maintenance Facility TWG, and the Natural Resources TWG. The findings of these groups are reflected in the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS) and the Conceptual Aquatic Resource Mitigation Plan (Attachment 9 to the Final EIS).The SR 520, I-5 to Medina project has been designed to minimize effects on fish and aquatic habitat to the greatest extent practicable.

Nighttime lighting for the bridge would be designed to minimize the amount and intensity of light that reaches the water surface while providing adequate safety for pedestrian and vehicle traffic. The amount of artificial light reaching the water surface would be reduced substantially compared to existing conditions. Shielding lights is one of the minimization measures the project will employ to limit light spillage onto the water's surface. Additional information on lighting for the Preferred Alternative is provided in the Potential Effects section of the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS). Chapter 2 of the Final EIS contains a description of the roadway lighting proposed for the Preferred Alternative.

During construction, WSDOT would identify site-specific in-water work windows appropriate to the aquatic habitat of listed species and regulated work windows to minimize potential effects on salmonids during sensitive periods.

With respect to the potential effects of shading on salmonid migration, the Preferred Alternative would reduce the intensity of the sharp edge

and would likely reduce the intensity of the shaded area under the bridge. In the West Approach area, the new bridge would generally be higher than the existing bridge, with a gap between the eastbound and westbound lanes. These reductions in the intensity of the shade are expected to offset some of the potential effects of the wider structure, resulting in similar salmonid migration behavior as occurs with the existing bridge. Refer to the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS) for a complete discussion

The project has been designed to safely minimize the number and size of pilings throughout the project corridor; this includes greater distance between permanent piling compared to the existing structure. The locations of permanent pilings are shown in Exhibit 19b of the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS) as dots along the bridge alignments.